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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,790	06/27/2003	Alan Michael Jaffee	7302	6842
7590	07/20/2005			
			EXAMINER	
			BOYD, JENNIFER A	
			ART UNIT	PAPER NUMBER
			1771	

DATE MAILED: 07/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/608,790	JAFFEE, ALAN MICHAEL	
	<b>Examiner</b>	<b>Art Unit</b>	
	Jennifer A. Boyd	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 01 July 2005.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1 - 7, 9, 11-23,25-29 and 31 - 33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1 - 7, 9, 11-23,25-29 and 31 - 33 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date \_\_\_\_\_
- 5) Notice of Informal Patent Application (PTO-152)  
 6) Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Request for Reconsideration***

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.
2. The Applicant's Amendments and Accompanying Remarks, filed July 1, 2005, have been entered and have been carefully considered. Claim 24 is cancelled and claims 1- 7, 9, 11- 23, 25 - 29 and 31 – 33 are pending. In view of Applicant's cancellation of claim 24, the Examiner withdraws the previously set forth 35 USC 112, 2<sup>nd</sup> paragraph rejection as detailed in paragraph 4 of the Office Action dated May 31, 2005. In view of Applicant's statement of common ownership of Kajander at the time the invention was made, the Examiner withdraws the rejections as detailed in paragraphs 6 and 10 of the previous Office Action. After another search, additional prior art has been found which renders in the invention as currently claimed unpatentable for reasons herein below.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Claim Rejections - 35 USC § 102***

4. Claims 1 – 7, 9, 12 – 15, 18, 29 and 33 remain rejected under 35 U.S.C. 102(b) as being anticipated by Graves (US 5,389,716). The details of the rejection can be found in paragraph 5 of the Office Action dated May 31, 2005. The rejection is maintained. Claim 17 is now rejected under 35 U.S.C. 102(b) as being anticipated by Graves (US 5,389,716).

Claim 17 requires that the second facer is a fibrous mat. It should be noted that facer materials such as the one described by Graves are traditionally applied to both sides of the gypsum board, thus the Examiner equates the mat to Applicant's "first and second facers".

***Claim Rejections - 35 USC § 102/103***

5. Claims 28 and 32 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Graves (US 5,389,716).

Graves teaches that the fibrous mat can comprise a binder composition and a mixture of glass and mineral fibers (column 3, lines 44 – 50). The fibrous mat comprises mineral wool fibers having a diameter between 2 and 6 microns (column 9, lines 50 – 60), which may be in part substituted with glass fibers (column 11, lines 33 – 37) having a diameter between 3 and 30 microns (column 10, lines 15 – 25). The glass fibers may be chopped glass fiber strands having a length between 1 mm and 75 mm (column 10, lines 15 – 25). The Examiner equates the glass fibers to Applicant's "chopped continuous glass fibers" and the mineral wool fibers to Applicant's "fine staple fibers". The weight ratio of the wool fibers to the glass fibers may range from 0:1 to 1:0 (column 11, lines 54 – 60) and the binder comprises 3 – 40% by weight of the mat (column 4, lines 34 – 40). Therefore, in one embodiment, the mineral wool fibers can comprise a portion of 1 – 30 percent of the mat meeting Applicant's requirement. It should be noted that facer materials such as the one described by Graves are traditionally applied to both sides of the gypsum board, thus the Examiner equates the mat to Applicant's "first and second facers".

As to claims 28 and 32, although Graves does not explicitly teach the claimed flame resistance to pass the test of ASTM Method E84, Class 1 as required by claim 28 and a permeability of at least 250 cfm/ft<sup>2</sup> at a differential pressure of 0.5 inches of water as required by claim 32, it is reasonable to presume that said properties are inherent. Support for said presumption is found in the use of like materials (i.e. a gypsum board having a facing layer comprising a mixture of varying diameter glass fibers and a binder) which would result in the claimed properties. The burden is upon the Applicant to prove otherwise. *In re Fitzgerald* 205 USPQ 594. In addition, the presently claimed property would obviously have been present once the Graves product is provided. Note *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977) as to providing of this rejection made above under 35 USC 102.

***Claim Rejections - 35 USC § 103***

6. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Graves (US 5,389,716) in view of Horner, Jr. et al. (US 6,365,533). The details of the rejection can be found in paragraph 7 of the Office Action dated May 31, 2005. The rejection is maintained.
  
7. Claim 26 remains rejected under 35 U.S.C. 103(a) as being unpatentable over Graves (US 5,389,716) in view of Carbo et al. (US 2004/0209071). The details of the rejection can be found in paragraph 9 of the Office Action dated May 31, 2005. The rejection is maintained.

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8. Claims 25 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graves (US 5,389,716) in view of Lehnert et al. (US 4,647,496). The details of the rejection can be found in paragraph 10 of the Office Action date May 31, 2005. The rejection is maintained.

9. Claims 1 – 7, 9, 11 - 14, 17 – 18, 23, 28 - 29 and 32 – 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kajander (US 5,837,621) in view of Gill et al. (US 4,637,951).

Kajander is directed to fire resistant glass fiber mats (Title) suitable for facer materials for gypsum wall components (column 6, lines 60 – 68 and column 1, lines 45 – 50).

As to claims 1, 29 and 32, Kajander teaches a gypsum wall board having facer components comprising a nonwoven mat containing glass fibers having diameters in the range of 3 – 30 microns, most preferably 10 – 17 microns (column 7, lines 10 – 25). Kajander teaches that the fibers can be up to about 3 inches in length (column 7, lines 20 – 30). Kajander notes that generally the longer the fiber, the higher the tensile and tear strengths of the mat, but the poorer the fiber dispersion (column 7, lines 25 – 30). Kajander notes that the glass fibers used normally have about the same length but fibers of different lengths and *diameters* can be used to get different characteristics in a known manner (column 7, lines 20 – 27). Kajander teaches the use of 10 – 40% weight percent of binder based on the total weight of the glass fibers (column 8, lines 35 – 40).

As to claims 2 - 3, Kajander teaches that the fibers can comprise e-glass or c-glass fibers (column 7, lines 30 – 35).

As to claim 9, Kajander teaches that the glass fibers can comprise various glass fiber of different lengths (column 7, lines 20 – 30).

As to claim 11, Kajander teaches that the fibers can comprise e-glass or c-glass fibers (column 7, lines 30 – 35).

As to claim 17, it should be noted that facer materials such as the one described by Kajander are traditionally applied to both sides of the gypsum board, thus the Examiner equates the mat to Applicant's "first and second facers".

As to claim 18, Kajander teaches that the resin can comprise nitrogen containing components such as melamine formaldehyde resin, urea formaldehyde resin, melamine modified phenol formaldehyde and resins such as acrylic resin (column 5, lines 50 – 67).

Kajander fails to teach a major portion of chopped glass fibers having a diameter range from about 8 – 17 microns and a minor portion of fine staple fibers having a diameter less than about 5.5 microns, where the minor portion comprises 1 – 30% by weight of the dry web, or specifically 20 – 30% as required by claim 15.

Gill is directed to fibrous mat facers with improved strike-through resistance (Title). Gill teaches glass mats comprising a mixture of two types of glass fibers, both being glass monofilament fibers (column 3, lines 5 – 10). The first type, or base fibers, comprise glass monofilament fibers of conventional form and composition. Generally, these fibers are made by a continuous filament process and chopped to discrete and predetermined lengths and range from 8 – 25 microns in diameter (column 3, lines 15 – 25). Gill notes that the lower diameter limit is set by process restraints. The upper limit is determined by material usage considerations as well as hand or feel of the final mat material. The coarser fibers result in an abrasive and irritating feel

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which would make such a mat undesirable (column 3, lines 20 – 25). The other basic fibers in the mat are microfibers having a mean diameter range from 0.05 to 3.5 microns (column 3, lines 40 – 58). Gill teaches that the lower practical amount of microfibers ranged from about 2 – 37% (column 6, lines 10 – 30).

It would have been obvious to one of ordinary skill in the art to use the suggested mixture of glass fibers where the microfibers are present in the amount of 2 – 37% by weight of the mat as discussed by Gill in the mat of Kajander motivated by the desire to create a facer with improved strike-through resistance and skin-irritation problems.

As to claims 1, 4 – 7, 12 – 14, 29, 32 and 33, Kajander in view of Gill discloses the claimed invention except for that the chopped glass fibers have an average fiber diameter ranging from about 8 – 17 microns and the microfibers have a range less than about 5.5 microns as required by claims 1, 29 and 32 - 33, the chopped glass fibers have a diameter range from about 10 – 16 microns as required by claim 4, the chopped glass fiber length ranging from 5 – 30 mm as required by claim 5, the chopped glass fibers have a diameter range of about 11 +/- 1.5 microns as required by claim 6, the glass fiber having an average length ranging from 6 – 12 mm as required by claim 7, the average fiber diameter of the fine staple fibers are less than 3.5 microns as required by claim 12, the fine staple fiber have a diameter of less than about 1.9 microns as required by claim 13 and the fine staple fibers have a fiber length of less than 7 mm as required by claim 14. It should be noted that fiber diameter and length are result effective variables. Gill notes that the fiber diameter is dictated by process restraints for the lower limit and material usage considerations and hand for the upper limit (see Gill, column 3, lines 15 –

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25). Kajander notes that the fiber length influences the ease of processing and the strength of the mat. The longer the fiber, the higher the tensile and tear strengths of the mat, but the poorer the fiber dispersion (see Kajander, column 7, lines 20 – 30). It would have been obvious to one having ordinary skill in the art at the time the invention was made to create the chopped glass fibers have an average fiber diameter ranging from about 8 – 17 microns and the microfibers have a range less than about 5.5 microns as required by claims 1, 29 and 32 - 33, the chopped glass fibers have a diameter range from about 10 – 16 microns as required by claim 4, the chopped glass fiber length ranging from 5 – 30 mm as required by claim 5, the chopped glass fibers have a diameter range of about 11 +/- 1.5 microns as required by claim 6, the glass fiber having an average length ranging from 6 – 12 mm as required by claim 7, the average fiber diameter of the fine staple fibers are less than 3.5 microns as required by claim 12, the fine staple fiber have a diameter of less than about 1.9 microns as required by claim 13 and the fine staple fibers have a fiber length of less than 7 mm as required by claim 14 since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art.

*In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). In the present invention, one would have been motivated to optimize the fiber diameters and fiber lengths in order to create a mat having a non-abrasive and irritating hand and sufficient strength making it suitable for facing materials for gypsum boards.

As to claims 23, 28 and 32, although Kajander in view of Gill does not explicitly teach the claimed glass transition temperature ranging from 15 – 45 degrees C as required by claim 23, flame resistance to pass the test of ASTM Method E84, Class 1 as required by claim 28 and a

permeability of at least 250 cfm/ft<sup>2</sup> at a differential pressure of 0.5 inches of water as required by claim 32, it is reasonable to presume that said properties are inherent. Support for said presumption is found in the use of like materials (i.e. a gypsum board having a facing layer comprising a mixture of varying diameter glass fibers and claimed binder) which would result in the claimed properties. The burden is upon the Applicant to prove otherwise. *In re Fitzgerald* 205 USPQ 594. In addition, the presently claimed property would obviously have been present once the Kajander in view of Gill product is provided. Note *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977).

10. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kajander (US 5,837,621) in view of Gill et al. (US 4,637,951) as applied above, and further in view of Horner, Jr. et al. (US 6,365,533).

Kajander in view of Gill teaches the claimed invention above but fails to disclose that the second facer can comprise kraft paper.

Horner, Jr. et al. is directed to a foamed facer suitable for use in the construction industry comprising a dry preformed glass fiber mat containing a binder (Abstract). Horner teaches that the first and second facers can be of the same or of a different composition than that of this invention. More specifically, one of the facer sheets maybe be selected from those conventionally employed such as kraft paper and the other facer sheet is one of the current invention which enhances the composite (column 6, lines 1 – 15).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a kraft paper as one of the facer materials as suggested by Horner, Jr. et al. in

the gypsum board composite of Kajander in view of Gill motivated by the desire to save manufacturing costs by employing a conventional facer on one side and the improved and enhanced facer on the other side.

11. Claim 26 remains rejected under 35 U.S.C. 103(a) as being unpatentable over Kajander (US 5,837,621) in view of Gill et al. (US 4,637,951) as applied above, further in view of Carbo et al. (US 2004/0209071).

Kajander in view of Gill teaches the claimed invention above but fails to teach that the core further comprises a biocide.

Carbo is directed to a mold resistant acoustical panel (Title). Carbo notes that attempts have been made to reduce microbe growth by introducing biocides, such as fungicides and bactericides, into coatings for acoustical panels. Although some protection against microbe growth is obtained, it is short-lived under severe conditions. When the entire panel contains nutrients for microbes, the relatively small amount of biocide in the coating may not be sufficient to protect the larger amount of food available in the core of the panel (page 1, [0006]). Carbo teaches that the composition of the present invention protects the core of the panel, a function which is not guaranteed by antimicrobial coatings. The biocide in the core affords protection to the entire panel, even if no coating is used (page 2, [0013]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a biocide into the core as suggested by Carbo in the composite of Kajander in view of Gill motivated by the desire to afford microbe growth protection to the entire panel (Carbo, pages 1 – 2).

12. Claims 25 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kajander (US 5,837,621) in view of Gill et al. (US 4,637,951) as applied above, further in view of Lehnert et al. (US 4,647,496).

Kajander in view of Gill teaches the claimed invention above but fails to teach that the gypsum core comprises at least one water repellent agent as required by claim 25 and reinforcing fiber as required by claim 27.

Lehnert is directed to a fibrous mat-faced gypsum board for exterior-finishing systems for buildings (Title). The board comprises a gypsum core and a fibrous mats as facing materials (column 9, lines 5 – 10). The gypsum core preferably contains an additive to improve the ability of the gypsum composite to resist being degraded by water, for example, to resist dissolution (column 9, lines 50 – 60). Lehnert teaches that the gypsum core can further comprise a paper fiber which acts as a viscosity-control agent (column 13, lines 15 – 20).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate an water repellent agent as suggested by Lehnert in the core of Kajander in view of Gill motivated by the desire to improve the resistance of the composite to water.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate fiber into the gypsum core as suggested by Lehnert in the core of Kajander in view of Gill motivated by the desire to control the viscosity of the slurry during manufacturing.

13. Claims 1 – 7, 9, 11 – 14, 18 – 23, 28 - 29 and 31 – 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jaffee et al. (US 6,187,697) in view of Gill et al. (US 4,637,951).

Jaffee is directed to nonwoven fibrous mats suitable for facing gypsum boards (column 1, lines 25 – 35).

As to claims 1, 9, 29 and 31 – 33, Jaffee teaches a mat comprising a majority of glass fibers. The fibers used in the nonwoven portion should be at least 0.25 inch or longer (6.35 mm or longer) but mixtures of fibers of different lengths and/or fiber diameters can be used as is known (column 5, lines 25 – 35). The binder used to bond the fibers can be any binder capable of bonding the fibers together.

As to claims 2 – 3 and 11, Jaffee teaches that the glass fibers can be e, c, t, s or any known type glass fiber of good strength and durability in the presence of moisture and mixtures of lengths and diameters (column 5, lines 35 – 45).

As to claims 18 – 19 and 22, Jaffee teaches the use of UF or MF binders modified with polyvinyl acetate and or acrylic (column 5, lines 45 – 55).

Jaffee fails to teach a major portion of chopped glass fibers having a diameter range from about 8 – 17 microns and a minor portion of fine staple fibers having a diameter less than about 5.5 microns, where the minor portion comprises 1 – 30% by weight of the dry web, or specifically 20 – 30% as required by claim 15.

Gill is directed to fibrous mat facers with improved strike-through resistance (Title). Gill teaches glass mats comprising a mixture of two types of glass fibers, both being glass

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monofilament fibers (column 3, lines 5 – 10). The first type, or base fibers, comprise glass monofilament fibers of conventional form and composition. Generally, these fibers are made by a continuous filament process and chopped to discrete and predetermined lengths and range from 8 – 25 microns in diameter (column 3, lines 15 – 25). Gill notes that the lower diameter limit is set by process restraints. The upper limit is determined by material usage considerations as well as hand or feel of the final mat material. The coarser fibers result in an abrasive and irritating feel which would make such a mat undesirable (column 3, lines 20 – 25). The other basic fibers in the mat are microfibers having a mean diameter range from 0.05 to 3.5 microns (column 3, lines 40 – 58). Gill teaches that the lower practical amount of microfibers ranged from about 2 – 37% (column 6, lines 10 – 30).

It would have been obvious to one of ordinary skill in the art to use the suggested mixture of glass fibers where the microfibers are present in the amount of 2 – 37% by weight of the mat as discussed by Gill in the mat of Jaffee motivated by the desire to create a facer with improved strike-through resistance and skin-irritation problems.

As to claims 20 – 21, Jaffee in view of Gill discloses the claimed invention except for that the cross-linker is present in the amount of ranging up to about 10 weight percent as required by claim 20 and is present in the amount of 2 – 5 weight percent as required by claim 21. The amount of cross-linker affects the level of cross-linking present in the final structure. The level of cross-linking relates to the strength and flexibility of the product. It would have been obvious to one having ordinary skill in the art at the time the invention was made to create the mat where the crosslinker is present in the amount of ranging up to about 10 weight percent as required by

claim 20 and is present in the amount of 2 – 5 weight percent as required by claim 21 since it has been held that where general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 220 F.2d 454 USPQ 233 (CCPA 1955). In the present invention, one would have been motivated to optimize the amount of cross-linker in order to create a suitably strong and flexible mat for use as a facer for a gypsum board.

As to claims 1, 4 – 7, 12 – 14, 29, 32 and 33, Jaffee in view of Gill discloses the claimed invention except for that the chopped glass fibers have an average fiber diameter ranging from about 8 – 17 microns and the microfibers have a range less than about 5.5 microns as required by claims 1, 29 and 32 - 33, the chopped glass fibers have a diameter range from about 10 – 16 microns as required by claim 4, the chopped glass fiber length ranging from 5 – 30 mm as required by claim 5, the chopped glass fibers have a diameter range of about 11 +/- 1.5 microns as required by claim 6, the glass fiber having an average length ranging from 6 – 12 mm as required by claim 7, the average fiber diameter of the fine staple fibers are less than 3.5 microns as required by claim 12, the fine staple fiber have a diameter of less than about 1.9 microns as required by claim 13 and the fine staple fibers have a fiber length of less than 7 mm as required by claim 14. It should be noted that fiber diameter and length are result effective variables. Gill notes that the fiber diameter is dictated by process restraints for the lower limit and material usage considerations and hand for the upper limit (see Gill, column 3, lines 15 – 25). Additionally, it is known that fiber length influences the ease of processing and the strength of the mat. The longer the fiber, the higher the tensile and tear strengths of the mat, but the poorer

the fiber dispersion. It would have been obvious to one having ordinary skill in the art at the time the invention was made to create the chopped glass fibers have an average fiber diameter ranging from about 8 – 17 microns and the microfibers have a range less than about 5.5 microns as required by claims 1, 29 and 32 - 33, the chopped glass fibers have a diameter range from about 10 – 16 microns as required by claim 4, the chopped glass fiber length ranging from 5 – 30 mm as required by claim 5, the chopped glass fibers have a diameter range of about 11 +/- 1.5 microns as required by claim 6, the glass fiber having an average length ranging from 6 – 12 mm as required by claim 7, the average fiber diameter of the fine staple fibers are less than 3.5 microns as required by claim 12, the fine staple fiber have a diameter of less than about 1.9 microns as required by claim 13 and the fine staple fibers have a fiber length of less than 7 mm as required by claim 14 since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). In the present invention, one would have been motivated to optimize the fiber diameters and fiber lengths in order to create a mat having a non-abrasive and irritating hand and sufficient strength making it suitable for facing materials for gypsum boards.

As to claims 23, 28 and 32, although Jaffee in view of Gill does not explicitly teach the claimed glass transition temperature ranging from 15 – 45 degrees C as required by claim 23, flame resistance to pass the test of ASTM Method E84, Class 1 as required by claim 28 and a permeability of at least 250 cfm/ft<sup>2</sup> at a differential pressure of 0.5 inches of water as required by claim 32, it is reasonable to presume that said properties are inherent. Support for said presumption is found in the use of like materials (i.e. a gypsum board having a facing layer

comprising a mixture of varying diameter glass fibers and claimed binder) which would result in the claimed properties. The burden is upon the Applicant to prove otherwise. *In re Fitzgerald* 205 USPQ 594. In addition, the presently claimed property would obviously have been present once the Jaffee in view of Gill product is provided. Note *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977).

#### ***Response to Arguments***

14. Applicant's arguments filed July 1, 2005 have been fully considered but they are not persuasive.

Applicant argues that Graves does not disclose Applicant's claimed ranges. The Examiner acknowledges that Graves discloses a broad range of proportions of mineral wool and glass fibers, however, the disclosure of Graves still overlaps the Applicant's claimed ranges. Applicant argues that Table 1 of Graves discloses examples where the wool fiber percentage is far larger than Applicant's claimed range of 1 – 30 percent. It should be noted that disclosed examples and preferred embodiments do not constitute a teaching away from a broader disclosure or nonpreferred embodiments. See *In re Susi*, F.2d 442, 169 USPQ 423 (CCPA 1971). Furthermore, Applicant argues that the average glass fiber diameter range, length and fine staple fiber proportion is much broader than Applicant's claimed ranges. The Examiner submits that Graves teaches each and every limitation. If the claimed ranges have unexpected results, the burden is upon the Applicant to demonstrate that Applicant's narrower range is not a result of optimization. The Examiner highly suggests to the Applicant to submit a 37 CFR 1.132 Declaration to establish unexpected results. In the Declaration, the Applicant should compare a

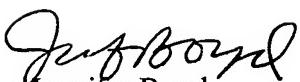
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sufficient number of tests both inside and outside the claimed range to show the criticality of the claimed range. *In re Hill*, 284 F.2d 955, 128 USPQ 197 (CCPA 1960) and must compare the claimed subject matter with the closest prior art to be effective to rebut a *prima facie* case of obviousness.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A. Boyd whose telephone number is 571-272-1473. The examiner can normally be reached on Monday thru Friday (8:30am - 6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Jennifer Boyd  
July 18, 2005

  
ULLA RUDDOCK  
PRIMARY EXAMINER